

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A process automation system, comprising:

process devices that execute predetermined functions as part of the process automation and thereby exchange data that are relevant to at least one of the functions and the devices within the process automation system,

wherein some but less than all of the data are exchanged in an encrypted form,

wherein, in at least a first of the process devices, a communication device determines by hard wiring or programming which of transmission data are encrypted in an encryption device of the first process device, and

wherein, in at least a second of the process devices, the communication device recognizes which of reception data are encrypted and decrypts the reception data in a decryption device of the second process device.
2. (currently amended): A process automation system as claimed in Claim 1,

wherein, of the data exchanged in the encrypted form, at least some of the same data are exchanged ~~in encrypted form and~~, in parallel, in an unencrypted form.
3. (currently amended): A process automation system as claimed in Claim 2,

wherein the encrypted data ~~is~~ are exchanged with a lower priority in comparison with the unencrypted data.

4. (currently amended): A process automation system as claimed in Claim 1, wherein the encrypted data ~~is~~ are exchanged with a lower priority in comparison with unencrypted data.

5. (currently amended): A process automation system as claimed in Claim 3, wherein the process devices comprise memories that collect the encrypted data before the encrypted data are exchanged.

6. (original): A process automation system as claimed in Claim 1, further comprising a central key administration that registers public encryption keys of the process devices and authenticates the public encryption keys with a private encryption key of the central key administration.

7. (currently amended): A process device for a process automation system, comprising:

a function device executing predetermined functions as part of process automation; and
a communication device connected to the function device and configured to connect into a process automation system for exchange of data, within the process automation system, that relate to at least one of ~~a~~ the function functions and ~~a~~ the function device;

wherein the communication device comprises an encryption device, a decryption device,
and means for performing the exchange of some but less than all of the data in encrypted
form determining by hard wiring or programming which of transmission data are encrypted in the

encryption device and means for recognizing which of reception data are encrypted and
decrypting the encrypted reception data in the decryption device.

8 - 12. (canceled).